

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

09 MAR 2005

Applicant's or agent's file reference 02 01 583 285	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)
International application No. PCT/DK 03/00593	International filing date (<i>day/month/year</i>) 12.09.2003	Priority date (<i>day/month/year</i>) 13.09.2002	
International Patent Classification (IPC) or both national classification and IPC F16K7/20			
Applicant DANFOSS AS et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 30.03.2004	Date of completion of this report 23.11.2004
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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/DK 03/00593

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-9 as originally filed

Claims, Numbers

1-8 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/DK 03/00593**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-8
Inventive step (IS)	Yes: Claims	
	No: Claims	1-8
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

2. Citations and explanations

see separate sheet

1. Independent claim 1:

1.1 From document **DE-A-883 373 (D1)** is known a flow control valve comprising (see esp. figures 1-3 and the corresponding description on page 2):

- a valve body 11 having a control chamber formed therein, said control chamber being in fluid communication with a fluid inlet passage 19 and a fluid outlet passage 20;
- an elastomeric element 13 placed inside said control chamber.

Furthermore, also the functional statement defined in the characterising portion is readable on this known control valve, viz. that flow forces from fluid communicated from one of said fluid passages to the other of said fluid passages will act on the elastomeric element 13 and hereby form at least part of the flow control function.

1.2 Therefore, the subject-matter defined in claim 1 lacks novelty, contrary to the requirements of Article 33(2) PCT.

1.3 Besides, it also has to be objected that the characterising portion of claim 1 contains no clear constructional feature of the claimed flow control valve but merely a functional statement related to the use of the valve, viz. that **"flow forces from fluid communicated from one of said fluid passages to the other of said fluid passages will act** on said elastomeric element and hereby form at least part of the flow control function".

Thus, claim 1 also does not meet the requirement of clarity as set out in Article 6 PCT.

2. Independent claim 8:

2.1 From document **DE-A-883 373 (D1)** is known a flow control valve comprising (see esp. figures 1-3 and the corresponding description on page 2):

- a valve body 11 having a control chamber formed therein, said control chamber being in fluid communication with a fluid inlet passage 19 and a fluid outlet passage 20;
- an elastomeric element 13 placed inside said control chamber; and
- an actuating member 22 placed in connection with said elastomeric element;
- whereby said elastomeric element 13, when said actuating member 22 is not activated, prevents fluid to be communicated from one of said fluid passages to the other of said fluid passages (cf. page 2, lines 65-68), and

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/DK 03/00593

- the flow control function at least partly is formed by activating said actuating member (cf. figure 2).

2.2 Therefore, also the subject-matter of claim 8 lacks novelty.

3. Beside document D1, reference is also made to the other documents cited in the search report which likewise anticipate the subject-matter of independent claims 1 and 8, respectively.

- With respect to document **DE-U-200 10 559 (D2)** the applicant is referred e.g. to figures 1 and 2: valve body 2; inlet and outlet passages 4,7; elastomeric element 20 inside the control chamber; actuating member 30.
- With respect to document **US-A-3 033 235 (D3)** the applicant is referred e.g. to figure 1 and the corresponding description: valve body 1; inlet and outlet passages 2; elastomeric element 5,6 inside the control chamber; actuating member 13.
- With respect to document **US-A-3 095 904 (D4)** e.g. the applicant is referred to figures 1-2: valve body 1; inlet and outlet passages 2,3; elastomeric element 7 inside the control chamber; actuating member 11,12,16.

4. **Dependent claims 2-7:**

The features defined in the dependent claims are likewise known from one or more of the documents cited in the search report.

Besides, similar objections concerning clarity as made for claim 1 under paragraph 1.3 above also apply to dependent claims 2,3 and 7.

5. **Further objection:**

There are defined two independent claims, viz. claims 1 and 8, in the same category and thus the requirement of concise claim drafting (Article 6 PCT) is not met.